United States Department of the Interior

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Instruction Memorandum **No. CA-2000-082**
Expires: 09/30/01

To: ACO's,
Attn: All Managers, Supervisors and Safety Officers

From: DSD, Support Services

Subject: Confined Space Entry Program

Attached is the California BLM Policy for implementation of Permit Required Confined Space, 29 CFR 1910.146. This policy establishes procedures for identifying hazards associated with confined space entry; controlling such hazards so that confined spaces can be entered safely; and providing information and training to employees working in or around confined spaces. This policy also provides guidance for the establishment of a written permit system.

Assistance in the implementation of this policy can be obtained from your District or Field Office Safety Officer or from the State Safety Manager.

Questions pertaining to this Instruction Memorandum should be directed to Jim Anger, State Safety Manager at (916) 978-4521.

Signed
Karen Barnette
DSD, Support Services

Authenticated
AJ Ajitsingh
Records Management

1 - Attachment:
Confined Space Entry Program *(Including Appendix 1-4)* (14pgs)

Distribution:
Bruce Prater, HR240

POLICY FOR CONFINED SPACE ENTRY

I. PURPOSE:

This BLM California Policy provides requirements for the establishment of a confined space e which complies with the Occupational Safety and Health Administration (OSHA) Confined S Regulations, 29 CFR 1910.146.

This policy establishes procedures for (1) identifying hazards associated with confined space controlling such hazards so that confined spaces can be entered safely, and (3) providing inf training to employees working in or around a confined space. The BLM California Confined S Program also establishes a written permit system.

II. RESPONSIBILITIES:

Managers and supervisors shall be responsible for:

A. Administering the Confined-Space Entry Program.

B. Providing employee training.

C. Maintaining all documentation relating to confined space list(s), hazard identification, control, written permit system, employee information, prevention of unauthorized ent training, providing proper equipment and training on the use of such equipment, resc from external hazards, and duties of employees.

D. Providing employee access to all information required under the Confined Space Entry

E. Providing personal protective equipment, testing and measuring equipment, communication equipment, and/or rescue equipment as needed.

III. DEFINITIONS:

ATTENDANT: means an individual stationed outside the permit-required confined space wh required by this standard and who monitors the authorized entrants inside the permit-requir space. An attendant may not monitor more entrants than the entry permit specifically autho monitor more permit-required spaces than specified in the permit.

AUTHORIZED ENTRANT: means an employee who is authorized by the employer to enter a confined space. Authorized entrants may rotate duties, serving as attendants if the permit p entry permit so state. Any properly trained person with the authority to authorize entry by o may enter the permit space during the term of their permit provided the attendant is informe

BLINDING/BLANKING: means inserting a solid barrier across the open end of a pipe leading the confined space, and securing the barrier in such a way to prevent leakage of material int space.

CONFINED SPACE: is defined as an enclosed space:

a. large enough and so configured that an employee can bodily enter and perform assig

CONFINED SPACE (Cont'd)

b. with limited or restricted means for entry or exit; e.g. tanks, vessels, silos, storage bin vaults, pits, and diked areas; and

c. which is not designated for continuous employee occupancy.

DOUBLE BLOCK AND BLEED: is a method used to isolate a confined space from a line, duct physically closing two in-line valves on a piping system, and opening a vented-to-atmosphe between them.

ENGULFMENT: means the surrounding and effective capture of a person by a liquid or finely substance.

ENTRY: is the action by which a person passes through an opening into confined space and to have occurred as soon as any part of the entrant's body breaks the plane of an opening in

EXCAVATION: is defined as any man-made cut, cavity, trench, or depression in an earth sur earth removal.

HAZARDOUS ATMOSPHERE: is any atmosphere which by reason of being explosive, flamm poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may illness, or injury. OSHA defines hazardous atmosphere as an atmosphere that may expose e risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness from the following causes:

a. Oxygen-deficient or enriched atmosphere; an oxygen content <19.5% or >23.5%.

b. Flammable/explosive atmosphere; >10% of the Lower Flammable Limit (LFL) of a flam vapor, or mist or an airborne combustible dust at a concentration that meets or excee (obscures vision at a distance of five feet or less).

a. Toxic atmosphere; a contaminant which could result in an exposure in excess of the OSHA Permissible Exposure Limit (PEL); when there is no OSHA PEL for the substance, other applicable sources of information and criteria must be used.

d. An atmosphere recognized as Immediately Dangerous to Life or Health (IDLH).

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH): means any condition which poses or delayed threat or loss of life or could cause irreversible health effects or would interfere wi individuals ability to escape unaided from the permit space.

INERTING means rendering the atmosphere of a permit space non-flammable, non-explosive chemically non-reactive by such means as displacing or diluting the original atmosphere wit gas that is non-reactive with respect to that space.

ISOLATION: means the separation of a permit space from unwanted forms of energy which serious hazard to permit space entrants. isolation is usually accomplished by means such a blanking/blinding, removal or misalignment of pipe sections or spool pieces, double block an lockout/tagout.

LBL/LFL and UBL/UFL: mean lower explosive limit/lower flammable limit and upper explosive flammable limit.

PERMIT-REQUIRED CONFINED SPACE: contains one or more of the following characteristics

a. a hazardous atmosphere or a known potential to contain a hazardous atmosphere;
b. a material with the potential for engulfment of an entrant; e.g. grain, ore, sand, water
c. an internal configuration such that an entrant could be trapped or asphyxiated by in converging walls, or a floor which slopes downward and tapers to a smaller cross se
d. any other recognized serious safety or health hazard.

NON-PERMIT REQUIRED CONFINED SPACE: is one that does not contain nor, with respect hazards, has the potential to contain any hazard capable of causing death or serious physica

IV. PROGRAM ELEMENTS:

The following are elements of the BLM California Confined Space Entry Program:

A. IDENTIFICATION OF CONFINED SPACES: Recognize and identify all confined spaces area.

B. HAZARD IDENTIFICATION: Identify and evaluate each hazard of the confined spaces including determination of severity.

C. HAZARD CONTROL: Establish and implement the means, procedures and practices which the confined spaces can be entered safely.

D. PERMIT SYSTEM: Establish a written permit system for the proper preparation, issua implementation of entry permits.

E. EMPLOYEE INFORMATION: Signs shall be posted near confined spaces to notify emp hazards may be present and that only authorized personnel may enter the confined sp

F. PREVENTION OF UNAUTHORIZED ENTRY: Prevent unauthorized employee entry thro measures as training or by posting signs and barriers, as necessary.

G. EMPLOYEE TRAINING: Train employees, in accordance with the standards and regul that attendants, authorized entrants and personnel authorizing or in charge of entry o work in and around the permit space.

H. EQUIPMENT: Provide, maintain and ensure the proper use of the equipment necessa entry, including testing, monitoring, communication and personal protective equipme

I. RESCUE: Ensure that the procedures and equipment necessary to rescue permit entrants fro spaces are implemented and provided.

J. PROTECTION FROM EXTERNAL HAZARDS: Ensure that all pedestrian, vehicle or othe necessary to protect entrants from external hazards are provided.

K. DUTY TO OTHER EMPLOYERS: BLM will inform contractors and other appropriate er applicable confined spaces and their hazards and of any other work place hazards, sa emergency procedures necessary to comply with the confined space entry program.

V. DETAILED DESCRIPTION OF PROGRAM ELEMENTS:

A. IDENTIFICATION OF CONFINED SPACES: Managers and supervisors are responsible for identification of all confined spaces in their work areas. Appendix I contains the criteria th used to identify all confined spaces and permit-required confined spaces. A listing of perm confined spaces will be prepared and updated at least annually. The listing, prepared in a to Appendix II, is a part of the confined space entry program and must be made available t employees. Each Resource Area Office will maintain a consolidated listing of all permit-rec confined spaces within their Resource Area.

B. HAZARD IDENTIFICATION: An evaluation of the following will be used to properly identify confined spaces:

Past and current uses of confined spaces which may adversely affect the atmosphere confined space. *Examples are:*

a. Review Material Safety Data Sheets (MSDS) of materials previously or currently used in the confined space
b. Protective coatings which could trap materials or decompose or react with agents or heat from welding, brazing, or cutting
c. Operation of engine powered equipment in the confined space

2. Physical characteristics, configuration, and location of the confined space. Such consideration shall include: means of entry and exit, hazards posed by adjacent sp operations or natural conditions; e.g. flooding, fuel leaks, solvent or antifreeze run- or dead animals or insects.

3. Existing or potentially hazardous atmosphere in the confined space, such as:

a. Oxygen deficient or enriched atmosphere
b. Flammable/explosive atmosphere
c. Toxic or hazardous atmosphere

OSHA classifies the following as hazardous atmospheres:

- an oxygen content <19.5% or >23.5%.
- >10% of the Lower Flammable Limit of a flammable gas, vapor, or mist.
- an airborne combustible dust at a concentration that obscures vision at a distance of five feet or less.
- a contaminant which could result in an exposure in excess of the OSHA Permissible Exposure Limit, when there is no OSHA PEL for the substance, othe sources of information and criteria must be used.
- an atmosphere recognized as Immediately Dangerous to Life or Health.

4. Testing: The atmosphere in the confined space to be entered will be tested before made. The sequence of testing for hazardous atmospheres in a confined space wil oxygen content, (2) flammability/explosiveness, and (3) concentration of contamina good reason for the order is that when a direct reading instrument is used in an at with a low oxygen content, an accurate flammability reading is not obtained.

5. An evaluation of the physical hazards present is also necessary as part of the haza identification process, e.g., electrical hazards, tripping hazards, hot surfaces, jagge etc.

6. Biological hazards must be determined. Biological hazards are defined as infectiou that present a risk or potential risk to the well being of humans, or other animals, e through infection or indirectly through disruption of the environment.

C. HAZARD CONTROL. Energy sources which are potentially hazardous to entrants are secured, relieved, disconnected or restrained before entry. Energy sources may incluc electrical, mechanical, hydraulic, pneumatic, chemical, thermal, radioactive, and the e gravity. Means of such control are:

1. *Isolation*: Isolate the confined space by depressurizing and disconnecting supply li providing a blind/blank on the piping outside of the confined space, removal, or doubl bleed as needed to prevent entry of potentially hazardous materials, e.g., flammable, irritants, or oxygen displacing gasses. Be sure that contaminants from adjacent proc enter the confined space.

2. *Lockout/tagout:* A lockout/tagout procedure is to utilized to eliminate the possibilit of starting-up equipment that will endanger the health and/or safety of the confined space occupants.

3. *Ventilation:* Confined spaces are frequently ventilated to assure that the concentra contaminants do not exceed acceptable levels. Ventilation may be required on a cont to keep contaminant concentration at acceptable levels. Explosion proof air movers n if flammable atmospheres are involved or suspected.

4. *Cleaning:* Cleaning is sometimes a control method utilized for the purpose of carry some other work, e.g., welding or construction within the confined space. Hazards n controlled to a safe level. A hot permit must be obtained if welding is to be conducte confined space.

5. *Personal Protective Equipment (PPE):* PPE is also a control method including: hea protection, eye and face protection, hand protection, foot protection, clothing, respira protection, and hearing protection.

It is of little value to recognize hazards or potential hazards in confined spaces and nc them so that employees can make a safe entry. Hazards must be controlled to a safe

D. PERMIT SYSTEM: A written permit which authorizes entry into the permit-required confined space will be issued by the supervisor or manager authorizing the entry only conditions specified for the entry have been meet.

The written permits should all be in the same format and must contain the data show Appendix III. *Each permit must include the following data:*

1. The identity of the permit space.
2. The purpose of the entry.
3. The date of the entry and the authorized duration. Since each confined space mus assessed before the first entry of every shift, the permit duration will not be longer shift. The manager or supervisor authorizing the entry will issue a new permit at beginning of each shift.
4. A list of personnel authorized to enter the confined space.
5. A list of eligible attendants.
6. A list of individuals eligible to be in charge of the entry.
7. A provision for the printed name and signature of the manager or supervisor autho entry.
8. A list of hazards in the space to be entered.
9. The measure for isolating the space.
10. Control measures, e.g., lockout/tagout, purging, inerting, ventilating, and flushing.

Permit Data: (cont'd)

11. Maximum acceptable airborne level of a contaminant.
12. Results of initial and periodic tests, time of tests, and names or initials of the teste
13. Testing and monitoring equipment to be used and a description of the procedures to verify that environmental conditions are maintained during the entire entry.
14. Rescue service and any other services to be used and the means of communicatio including the numbers to call.
15. Rescue equipment to be provided at the site.
16. The communication system between the entrants and the attendant.
17. Personal protective equipment to be used.
18. Any other information needed to make the entry safe.

Appendix IV (Confined Space Entry Checklist) is a checklist to aid managers and supervisors, attendants, entrants, and in making a safe entry.

Non-permit required confined spaces pose no actual or potential hazards. A non-perm confined space must be evaluated for actual or potential hazards before each entry.

E. EMPLOYEE INFORMATION: Employees are to be informed of existing confined spaces against unauthorized entry. Signs shall be posted near permit-required confined spac employees of the hazards that may be present and that only authorized personnel may space. A sign reading "DANGER - PERMIT REQUIRED CONFINED SPACE, *DO NOT EN* must be posted near the entrance to the space.

F. PREVENTION OF UNAUTHORIZED ENTRY: Unauthorized employees are to be prevente entering confined spaces through such measures as training and posting appropriate barriers. The attendant at a confined space has the responsibility of taking action to p unauthorized personnel from entering the space. Such action includes:

1. Warn the unauthorized person away from the space.
2. Request the unauthorized person to exit the permit-required space immediately.
3. Inform the authorized entrants and any other persons designated by the manager supervisor if unauthorized persons have entered the permit-required space.
1. Obtaining law enforcement assistance to prevent unauthorized persons from ente spaces.

G. EMPLOYEE TRAINING: Training is a key element of a successful confined space entry program. The authorized entrant, the attendant, and the manager or supervisor assu of the entry must be properly trained.

1. Training is to be provided to each affected employee before he/she performs an ass under the confined space entry program, before he/she performs a different duty u confined space entry program, whenever there is a change in permit-required conf that presents a hazard for which the employee has not been trained, and whenev manager or supervisor has reason to believe that there are deviations from the per confined space entry procedures.

2. Entrant: The authorized entrant into a confined space must receive appropriate tra each of the following subjects and:

   a. Know what hazards are or may be present in the confined space.
   b. Be able to recognize the signs and symptoms of exposure to the hazard(s) present
   c. Understand the consequences of exposure to a hazard.

d. Understand the communication signals and how to use the communication system.
e. Maintain contact with the attendant.
f. Notify the attendant when there is a self-initiated evacuation.
g. Know what personal protective equipment and safety equipment must be used limitations of such equipment.
h. Understands the requirement to promptly exit the confined space when ordered by the attendant.
i. Knows to exit promptly when he/she perceives danger.

In addition to general instructions on confined space entry on a periodic basis, the entrant must receive/review instructions on the work they are about to preform and specifics on the confined space just prior to their entry. The amount of time spent in training/reviewing prior to entry will vary considerably and no specific time period is required.

3. Attendant: The confined space attendant shall be trained to perform the following duties:

a. Remain at the assigned station outside the permit space at all times during ent operations.
b. Maintain an accurate count of the persons inside the permit-required confined times.
c. Be able to recognize potential hazards.
d. Monitor activities inside and outside the confined space to insure safety.
e. Maintain effective communications with the entrants. Communication can be hand signals, 2-way radios, telephone or other means established before entry; the communications are clear and effective.
f. Maintain effective and continuous contact with the entrants.
g. Order an evacuation when:

1) A condition which is not allowed is observed.
2) Abnormal behavior on the entrants part is observed.
3) An activity outside the confined space could endanger those inside the con space.
4) An uncontrolled hazard inside the confined space is observed.
5) The attendants must leave their assigned station for any period of time.
6) An unauthorized person enters the confined space.

h. Summons rescue and other emergency service as soon as he/she determines escape from the confined space is necessary.
i. Orders unauthorized personnel away from confined space.
j. Informs authorized entrants of an unauthorized entrant as soon as it is discovered.
k. Does not enter the confined space to attempt rescue.
l. Properly uses the provided rescue equipment (without entry) and performs any duties assigned during the emergency or rescue.
m. Participates in simulated rescues at least annually along with the rescue team.

3. Individual Authorizing Entry. The manager or supervisor authorizing a confined sp must also receive appropriate training. The manager or supervisor must complete training provided to the authorized entrants and attendants. In addition, the mana supervisor must receive additional training in order to perform the following duties

   a. Determines that the entry permit contains the required information before authorizing entry.
   b. Assures that the necessary procedures and practices for safe entry are established and all necessary equipment is available.
   c. Monitors compliance with the permit specifications at appropriate intervals.
   d. Cancels or terminates entry when conditions are unacceptable.
   e. Terminates the entry permit at the conclusion of the work or shift, whichever o
   f. Takes the necessary steps to remove unauthorized personnel from or in the vicinity of the permit-required confined space.

H. EQUIPMENT: Even though hazard control is the first means of providing for a safe er confined space, testing and monitoring equipment, communications equipment, pers protective equipment, and rescue equipment are to be provided and used in the prope qualified person is to select the personal protective equipment for the entry, e.g., head foot protection, protective clothing, respiratory protection, and hearing protection. A person must also determine the equipment needed to make a safe entry and exit and efficient retrieval.

I. RESCUE: In all cases, BLM attendants will be prepared to perform a rescue without e confined space. A rescue service may also be used during emergency rescues; the na number of the emergency rescue service will be listed on each written confined space Should an emergency rescue become necessary, BLM will (1) inform the rescue servic hazards in the confined space, and (2) provide the rescue service access to all confine from which rescue may be necessary.

   Retrieval systems (equipment) will be used during authorized entries to facilitate non- unless the retrieval equipment increases the overall risk of entry or does not contribut rescue.

J. PROTECTION FROM EXTERNAL HAZARDS: Precautions to protect entrants from exte include: sign posting, prohibiting unauthorized entry, isolation, water removal, etc. Additionally, barriers may be needed to keep vehicles and pedestrians away from the space.

A. DUTY TO OTHER EMPLOYERS. BLM California will (1) inform contractors working at of permit-required confined spaces and that entry is allowed only after compliance wi confined space entry standard, (2) adequately apprise contractors of the hazards iden confined space and BLM's experience with the confined space, (3) appraise the contra precautions or procedures that BLM has implemented for the protection of employees the confined space, (4) coordinate entry operations with the contractor when both co BLM personnel are working in or around the confined space, and (5) debrief the contr end of the entry operations regarding hazards confronted or created.

   Contractors planning to enter a confined space will provide BLM 48-hour advance no planned entry. The contractor's entry will be in accordance with the Confined Space Entry Standard, 1910.146.

VI. PROGRAM EVALUATION

The effectiveness of the confined space entry program will be evaluated at specified freq

A. The immediate supervisor will evaluate employee's working knowledge of confined sp
by observing their work practices and listening to the briefings held just prior to confi
entry. Incorrect information, deficiencies, or inappropriate work practices will be corr
immediately.

B. The District and Field Office Safety Coordinators will conduct an annual formal evalua
District's Confined Space Entry Program and the proper application of the program to
spaces.

APPENDIX I

GUIDELINES FOR DETERMINING CONFINED SPACES

Bureau of Land Management - California

Facility Name: _____

Project Name: _____

Space: _____

Location: _____

The following criteria is to be used to determine if the space listed above is a confined space:

_____ The space is enclosed;

_____ The space is large enough and is configured so that an employee can bodily enter perform assigned work;

_____ The space has limited or restricted means for entry or exit; e.g. tanks, vaults, vessels, storage bins, hoppers, vaults, pits, and diked areas; and

_____ The space is not designed for continuous employee occupancy.

Note: If all four blanks listed above have been checked the space is a confined space.

The following criteria is to be used to determine if the confined space is a Permit-Required Confined Space:

_____ The space contains a hazardous atmosphere or a known potential to contain a hazardous atmosphere;

_____ The space contains a material with the potential for engulfment of an entrant; e.g. grain, ore, sand, liquid, etc;

_____ The space has an internal configuration such that an entrant could be trapped or asp inwardly converging walls, or a floor which slopes downward and tapers to a smalle section; and/or

_____ The space has some other recognized serious safety or health hazard.

Note: If one of the blanks listed above has been checked the space is a Permit-Required Confined Space.

APPENDIX II

BUREAU OF LAND MANAGEMENT, CALIFORNIA

LISTING OF PERMIT-REQUIRED CONFINED SPACE

District/Field Office _____

FACILITY	CONFINED SPACE LOCATION	CONFINED SPACE TYPE (tank, vault, pit, etc.)

APPENDIX III

BUREAU OF LAND MANAGEMENT, CALIFORNIA

CONFINED SPACE ENTRY PERMIT

Facility Name: _____

Project Name: _____

Confined Space: _____

Location: _____

Purpose of Entry: _____

Date of Entry: _____ Entry Time: _____ Exit Time: _____

Authorized Supervisor: _____

Authorized Attendant(s): _____

Authorized Entrant(s): _____

_____

_____

Known Hazards and Special Precautions: _____

_____

_____

Special Requirements (Y or N)

___ Lockout/tagout	___ Blinding/Blanking	___ Ventilation
___ Purging	___ Personal Protective Equipment	Retrieval lines
___ Disconnect Lines	___ Lighting	___ Inerting
___ Respirator	___ Tripod/hoisting equipment	___ Fire extinguishers
___ Communication Equipment		

Test Values

___ % Oxygen
___ % CO2
___ % H2S
___ % LFL
___ % CO
___ % HCN

Other Gasses, Vapors, Mist, or Dust: _____

_____

Testers Name: _____ Signature: _____

Date of Test: _____

Instrument Used: _____ Serial No.: _____

Rescue Service: _____ Phone No.: _____

Manager/Supervisor Authorizing Entry: _____

Date: _____

Signature: _____

APPENDIX IV

BUREAU OF LAND MANAGEMENT, CALIFORNIA

CONFINED SPACE ENTRY CHECKLIST

HAZARDOUS ATMOSPHERES VENTILATION

___ Flammibility
___ Oxygen content
___ Combustible dust, visual
___ Toxic gas measurement

___ Exhaust
___ Supply
___ Inert atmosphere

INFORMATION/TRAINING

___ Attendant
___ Entrants
___ Manager/supervisor
___ Contractors
___ Nearby workers
___ Rescue team
___ Signs, posting

PHYSICAL HAZARDS

___ Electrical
___ Mechanical
___ Tripping hazards
___ Caustics or acids
___ Temperature extremes
___ High pressure
___ Animals, insects, plants

PPE

___ Respirator
___ Glasses/goggles
___ Hard hat
___ Gloves
___ Clothing
___ Hearing protection
___ Face shield
___ Life line, lanyard
___ Retrieval line, harness, wristlet
___ Communication system(s)
___ Lighting

ISOLATION

___ Lockout/tagout
___ Blinding/blanking
___ Disconnect
___ Barricades
___ Rescue service contacted

___ Attendant
___ Buddy system
___ Secure all materials